

Abstract for the 14th Annual Winter Neuropeptide Conference

"Bombesin-like peptides: receptor distribution, physiology, and behavioral actions"

B. Flynn, P. Kulkosky, E. Ladenheim and T. Moody

An interest in the relevance of the amphibian peptide bombesin (BN) to mammalian function was stimulated by reports that a homologous peptide is present in mammalian central and peripheral nervous systems, and has a spectrum of biological activities. Our objective is to emphasize current findings that relate particular BN receptor subtypes and their distribution to behavioral and electrophysiological actions of BN-like peptides. Participants will discuss the characterization of BN receptor subtypes and their central and peripheral distribution. The functional roles of BN receptor subtypes and endogenous BN have been explored using selective receptor antagonists. The involvement of endogenous BN-like peptides and specific central and peripheral receptor subtypes in mediating the behavior-controlling actions of exogenous BN will be addressed. Particular attention will be devoted to the suppressive effect that exogenous BN-like peptide administration exerts on food and alcohol consumption. Recent results show that these actions of bombesin on intake depend on endogenous receptors for BN-like peptides. Whether the BN receptors that underlie these behavioral actions lie in the brain or periphery will be considered. The findings discussed will have bearing on the significance of BN-like peptides in the control of alcoholism and satiety.